

I claim:

1. An aerator tine for a soil aerator comprising:

an elongated member having a central axis, said elongated member having a first end having a plurality of converging soil  
5 fracturing faces terminating in an apex end and a second end for mounting said elongated member;

a soil cutting tube positioned in a side-by-side condition to said elongated member, said soil cutting tube positioned rearwardly of said apex end so that when said elongated member  
10 is axially driven into a patch of soil the plurality of soil fracturing faces penetrate and fracture the soil while the soil cutting tube cuts and removes a soil plug to thereby form a soil aeration pocket.

2. The aerator tine of claim 1 wherein the soil cutting tube has  
15 a cylindrical shape.

3. The aerator tine of claim 1 wherein the soil cutting tube has a conically tapered soil cutting end.

4. The aerator tine of claim 1 wherein the soil cutting tube is positioned at least one and one half inches rearward of said  
20 apex end.

5. The aerator tine of claim 1 wherein the soil cutting tube has an external diameter larger than the external diameter of the aerator tine.

6. The aerator tine of claim 1 wherein the soil cutting tube is  
25 positioned laterally of said aerator tine.

7. The aerator tine of claim 6 wherein the elongated member includes a soil lifting face.

8. The aerator tine of claim 1 wherein the soil cutting tube has  
5 a cutting edge extending substantially perpendicular to said central axis.

9. The aerator tine of claim 1 wherein the soil cutting tube has a discharge end.

10. A soil aerator tine comprising:

10 an elongated member, said elongated member having an exterior surface with at least one soil fracturing face; and

a soil cutting tube positioned on said elongated member and laterally offset with respect to said soil fracturing face, said soil cutting tube having a cutting edge to enable the soil  
15 aerator tine to form a soil aeration pocket by both soil cutting and soil fracturing.

11. The soil aerator tine of claim 10 wherein the elongated member includes a soil lifting face extending transverse to said elongated member.

20 12. The soil aerator tine of claim 11 wherein the soil cutting tube is positioned in a side-by-side condition proximate the elongated member.

13. The soil aerator tine of claim 10 wherein the soil cutting tube is positioned in a side-by-side condition proximate the elongated member.

14. The soil aerator tine of claim 10 wherein the soil cutting tube has a discharge area angularly positioned with respect to a cutting edge on said soil cutting tube.

15. The soil aerator tine of claim 10 wherein the at least one soil fracturing face in a diverging section diverges in a direction rearward from an apex end on said soil aerator tine and in a direction away from a lifting face on said soil aerator tine and includes two soil fracturing faces symmetrically positioned around a central axis extending through said soil aeration tine with said apex end located lateral of a central axis through said soil aeration tube.

16. A soil aerator tine comprising:

an elongated member, said elongated member having an exterior surface with at least one soil fracturing face, said at least one soil fracturing face terminating at an apex end; and

a soil cutting tube laterally positioned on said elongated member, said soil cutting tube having a cutting edge to enable the soil aerator tine to form a soil aeration pocket by both soil cutting and soil fracturing.